THE VETERINARY RECORD

A Weekly Journal for the Profession.

No. 635. SEPTEMBER 8, 1900. Vol. XIII.

Army Horses.

Whilst nearly all our newspaper correspondents complain of the horses in South Africa their statements are rendered of little value by their contradictions. Some praise the Argentine, some the Hungarian. A few state that the British horse holds his own. One thing is certain—that the horse question is of serious importance and that no one has yet mastered it. This war has shown that the horse instead of being a negligeable quantity in future wars will be of supreme importance. What we require is fact—some authoritative statements as to the best kind of horse for active service and as to the causes which have tended to inefficiency. Loss from wounds is more or less a stable factor which statistics can prove and which is unavoidable. Loss from disease is more indefinite and must depend upon the management, the surroundings and the care expended on selection. The loss from contagious diseases is, to a great extent, preventable. The prevalence of mange or glanders is evidence of bad management, but so long as the latter disease is permitted to exist in nearly every home county and every large town we cannot expect remounts in time of war to escape infection. The existence of influenza and contagious pneumonia is not so easy to provide against. One case introduced among a cargo of horses, or into a regiment or depôt, is enough to infect many, and when horses are collected in a hurry these diseases cannot well be avoided. What can be stopped is the association of visibly diseased horses with healthy. We gather from newspaper reports that the segregation of horses suffering from strangles and influenza has to some extent been neglected.

On active service one great cause of preventable inefficiency seems to have been sore-backs. On forced marches we imagine this condition becomes unavoidable, but the long retention of saddles might receive more attention, and perhaps the first abrasion or bruise might receive earlier attention and so prevent the frightful wounds we hear of.

Whenever horses are wanted in large numbers a majority of them must be unseasoned and therefore predisposed to all the ills that horseflesh is heir to. The scheme which registers horses for Army work so that they may be called up when wanted covers a large number of seasoned animals in hard condition. This scheme has not had fair play during the South African war. These registered horses should be the first to be claimed, and unsoundness should be widely construed. Horses that are employed daily in civil life are the most fit for hard work, and technical unsoundness is common. Probably half the working horses in the world are unsound—but they work. These animals are the ones that should go to the front first, so that the green, unconditioned horses might have a little time to become fit. The Remount Department should not reject the registered horse because it is a little stiff or not quite sound. As Kingsley said "the work of the world is done by the screws" and a pedantic standard of soundness leaves out the hardest and best workers, whilst it takes the useless and unconditioned.

ACCIDENT TO A HORSE'S FOOT.

In your issue of July 7th a most interesting article and illustration occurs, contributed by Mr. Rogerson, *re* accident to a horse's foot. Having had a somewhat similar case, I think the following notes may be of interest.

The subject was a six-year-old black carriage gelding, one of a pair, and when going down an incline on March 1st last, the traffic suddenly stopping, the horse's near hind foot slipped and the wheel of a railway van went over the coronet, imprisoning the foot. I was called by the police and found the horse, a very nervous animal, standing in a pool of blood, every now and then trying to put weight on the limb, and sending a spurt of blood in the direction of the bystanders at every attempt.

The foot was seen to be partially torn from the horny box and was padded with pledgets of tow and a tight bandage applied. and the animal removed to infirmary in an ambulance. On removing the bandages after the hæmmorrhage had ceased, the hoof was found to be severed from the sensitive parts from the inside of the toe to the outside heel; and the animal was suffering a great deal from the approaching suppuration. The shoe was removed and all the detached horn removed, leaving the foot without a vestige of horn except on the inside wall; the foot was dressed antiseptically, and fresh dressing applied daily until March 18th, when he rested a little weight on the limb.

On March 25th he was removed from the slings (in which he had been placed at the onset) and placed in a loose box with a good bed of moss litter, the foot was daily irrigated with cold water, and the coronet lightly blistered, it was also necessary to occasionally cauterize parts that were tumefied, to keep them below the level of the growing horn.

On 4th May a shoe was applied, the nails being driven into the inside wall, and the animal walked away sound to a park, where he was again blistered round the coronet, and afterwards turned out.

This case was not so bad as that reported by Mr. Rogerson, but he seems to be of opinion that all cases of this kind should be "destroyed with all possible speed," apparently on account of the hæmorrhage. I do not agree with him in this if the animal's age and constitution are good Had the accident to Mr. Rogersson's case happened in the streets of London, and it been a valuable animal, would he have had it destroyed at once, if he had satisfied himself that the horse was not unnerved?

This a question of some importance to town practitioners, and some further remarks on the subject would be of interest.

Alexander A. Johnson, M.R.C.V.S.

ABSTRACTS FROM FOREIGN JOURNALS.

Dog Plague, or the New Dog Disease.—Abstracts from a paper read by Veterinary Surgeon Richter, of Dessau, before the Central Veterinary Society of Saxony.

Richter describes the symptoms of this disease in much the same manner as has been noted by English veterinary surgeons. Out of about 1300 cases the deaths were 70 per cent.

Treatmeut—Slight Cases.—Rest and quiet. Diet, very little boiled water or no water at all, meal and milk, barley or water gruel, bouillon with egg and finely shred raw meat, cocoa or tea with milk; Preissnitz's poultices, slight massage of the bladder, in convalescence pepsin wine in small doses. In erosions of the mouth irrigations with pot. permanganate, one to two per cent.

Severe Cases—Ice pills, creosote with gum arabic, bismuth in oil or gum arabic, tannin and iron preparations. Morphia subcutaneously sometimes useful. After treatment, tincture of rhubarb, pepsin and hydrochloric acid; massage, friction, and electricity in the resulting lamenesses.

Prophylaxis.—Isolate the sick animal, carefully remove and destroy the dejections; boiled water, good light diet; fasten the animal to one side of his abode so as to avoid contact with the opposite side. On an outbreak of the illness use as prophylactics, calomel and castor oil, sodium salicylate, creolin, creosote and bismuth.

Inoculation Experiments.—On September 22nd, 1899, Veterinary Surgeon Pirl took some gall under sterile precautions from the gall bladder of a dog dead of the disease. Five cubic centimetres of this gall were injected subcutaneously over the right abdominal region of a fox-terrier a year old.

At midday at the point of injection slight œdema was present but the dog was lively and free from further appearances of illness; in the evening there was languor and failure of appetite, and pulse 130; respirations 20; temperature 39·8.

On September 24th, rigors, elevated back, whining and pain over abdominal region. Œdema less, pulse 140; respirations 22; temperature 40 2; loss of appetite all day.

On the evening of the same day fæces covered with bloody slime; temperature 39·9; pulse 150, small and weak; the animal tried to maintain the standing position, no loss of sensation.

September 25. Temperature 36·8; respirations 20, superficial; pulse 60, and weak, quick and almost imperceptible. Commencing coma, dribbling of saliva, vomition movements, vomition and convulsions.

At half past one midday, temperature 35, pulse imperceptible; heart beats 34 per minute; respirations 30 per minute, and deep clonic and tonic spasms, dark yellow urine, pulpy fæces mixed with blood. The visible mucous membranes were *not* coloured yellow,

At 3 o'clock the animal was killed by a blow on the forehead and a post-mortem made in the presence of Veterinary Surgeon Pirl.

Autopsy. Œdematous swelling in the right abdominal region up to the breast bone, result of subcutaneous injection. Abdominal and thoracic cavities empty, intestinal canal greyish red, bladder almost empty. Kidneys, spleen, liver and gall bladder as in the earlier post-mortems, *i.e.*, kidneys injected, spleen swollen, liver dark cherry red, congested, acini unrecognisable and the whole organ swollen, gall bladder full and gall thick and dark green. Mucous membrane of stomach up to the pylorus reddened, and vermiform folds swollen. Mucous membrane of duodenum swollen, greyish red and in places spotted rosy red. Mucous membrane of the small intestine swollen, disintegrated, greyish red with slimy deposit. Large intestine exhibited similar changes to those of small intestine; ileo-cæcal valve reddened at its edges, rectum greatly inflamed up to its duplicature with hæmorrhagic streaks at its termination. Mesenteric glands greatly swollen. No special changes in organs of thoracic cavity. No special lesions in the mouth.

A second dog was inoculated with gall taken from the first animal. This animal was a bastard setter about 4 years old and of strong constitution, and only two cubic centimetres of gall were used. The dog was injected on September 25 and had an attack of the illness running its course up to October 2 when an abscess formed at the point of injection which was opened, and the dog recovered. Cultures were taken by Pirl from the gall of the first animal.

Mice and rabbits inoculated with these cultures showed the characteristic symptoms of the illness whilst other animals not inoculated but in the same abode remained healthy. None of the animals died. The communicability of the disease could not be established except by inoculation with gall. Also healthy dogs put into a room or kennel with a sick dog did not become infected.

No doubt ought to arise as to the difference between this disease and distemper. We may have similar severe affection of the digestive apparatus, nervous disturbance, loss of power in the hind quarters, muscular spasms as in distemper, but we never get the typical inflammation of the eyes, exanthema, high initial fever, nasal discharge, cough, catarrhal pneumonia and nervous convulsions. In the dog plague middle-aged and old dogs are chiefly affected.—(*Berliner Thierärzt Woch.*

Laparotomy as an Explorative Operation in Diseases of the Female Sexual Organs.—By M. G. de Bruin.

In the present state of our knowledge and with the means at hand for preventing infection the opening of the abdominal cavity is no longer attended with the danger that formerly existed. It is now possible for us to perform laparotomy in cattle and the small domestic animals without endangering the life of the animal.

By means of aseptic care one can also open the abdominal cavity in individual cases as a means to establish a correct diagnosis. It seems above all

necessary that one should at times take advantage of this aid to diagnosis when collective symptoms do not help us to come to a correct diagnosis. It seems also questionable whether the therapeutist is right in operating perhaps before the symptoms justify him in doing so, when laparotomy may be undertaken with so little danger.

Cases occur to me where appearances justify us in locating the seat of disease in the abdominal cavity and where laparotomy enables us to confirm our diagnosis, and by this means a rational treatment instead of an aimless one may be undertaken. I will endeavour to enumerate here the cases in which this operation is justifiable.

Indications in the Cow.

(1.) *Abscesses in the parametrium.*—Rectal exploration enables us in many cases to form a diagnosis, but not always. The appearances by which these abscesses denote their presence are often trivial and not of the kind to make one absolutely certain of their existence.

We get emaciation of the cow the first week after calving, weak gait, and pain on pressure over the lumbar region. The condition does not always follow a difficult parturition but may ensue after a normal one. Infection generally arises through the wounded cervix, seldom through the uterus. The situation is between the plates of the mesometrium at the concave edge of the horn of the uterus or more peripherally against the ilium. In recent cases the serosa of the womb is drawn inwards and plainly thickened. Although one generally finds a single abscess of very large size, yet often one may encounter numerous abscesses situated in the mesometrium and the pelvic cellular tissue. In recent cases it is possible to puncture the abscess with the trocar through the upper wall of the vagina, in later cases and when the abscesses are numerous this is of no use If by multiple abscess formation polyarthritis or a metastatic inflammation of the tendon sheaths occurs treatment is useless.

2.—*Extra-Uterine Maceration of the Fœtus.*—This happens very seldom in the cow, and only one case that I know of is recorded in our literature and that is the one recorded by Cocquet. In this case the wall of the sac in which the fœtus was enclosed had grown to the colon. After maceration had occurred a perforation arose through the colon in consequence of which a portion of the fœtus was evacuated with the fæces. In dogs after torsion and isolation of an ampulla mummification as well as maceration of the fœtus may occur, and this happens frequently in hares. It will be seen then that in extra uterine maceration an extended peritonitis may arise in consequence of which different organs may become adherent. This may also be the case in intra-uterine maceration. The serosa of the uterus may become adherent to the urinary bladder, the rectum, the cœcum, and the abdominal wall, and thus perforation can arise in different ways as has been amply seen in the case of sheep.

Diagnosis can be made with certainty after exploratory laparotomy. A cure can, however, only be expected if the sac wherein the fœtus is macerated has grown to the abdominal wall and laparotomy can be undertaken at a place where a sufficiently adhesive inflammation prevents the danger of the infection of the still intact peritoneum.

(3) *Ovarial Swellings.*—Diagnosis is generally possible here by means of rectal exploration. In the cow cystomas of enormous circumference and weighing 90 kilogrammes have been noticed, and adenocarcinomas and sarcomas of 1 to 20 kilos in weight. These can cause disturbance of circulation and death through internal hæmorrhage. In many cases these tumours give slight evidences of their existence during life. Now and then, however, a timely examination and operative interference might have saved the animal for the owner.—ex-*Berliner Thierärzt Woch.*

(To be Continued.)

G. M.

EXTRACTS AND NOTES.

INOCULATION AGAINST CHOLERA AND TYPHOID.

Some official correspondence relating to preventive inoculation against cholera and typhoid in India has just been issued as a Parliamentary paper. With regard to the prevention of cholera, it shows that anti-choleraic inoculation was tried during 1896 in Bengal under the supervision, first of Professor Haffkine, and then by Surgeon-Captain Vaughan, Deputy Sanitary Commissioner of the Western Bengal Circle, and two assistant-surgeons acting under his general instructions. Dr. Vaughan says in his report on the operations carried out under his supervision in Purulia and in the Manbhum district and in Kandra :—

The operation of protective inoculation was at first done in two stages—*i.e.*, the inoculation with what used to be termed the "first vaccine" to begin with, and later on inoculation with the "second vaccine." For various reasons this was found to work inconveniently in practice, and as it came to be ascertained that it was quite practicable to omit the inoculation with the "first vaccine," the operation is now limited to inoculation with the "second vaccine" only. Anti-choleraic inoculation, as far as I have known it and of it, has always been strictly voluntary, and the work has increased. A large section of what has been done has been among coolies bound for the tea-gardens. The conditions of emigrant travel are such that cholera is very frequent and often very destructive of life. It appears that the impression has gradually gained ground that the inoculated are not nearly so liable to be attacked as the uninoculated. When we first began work in Purulia, we had to go round coolie depôts and inoculate whom we could persuade. Since then Messrs. Driver and Stainforth, the principal forwarding agents in Purulia, have given expression to a decided preference for inoculated coolies ; and a few days ago a tea planter from the Kalain tea estate in Cachar arrived in Purulia, selected 200 coolies, and quite spontaneously had every one of them inoculated. This gentleman declared to me that most of the coolies on the garden are inoculated, and that the place is practically free from cholera Coolies are now brought to my workroom regularly and daily, and last month in this way we inoculated no less than 1,776 emigrants. These details do not all strictly belong to the work of 1896, but are quoted to show how it has grown.

The tables of results show, as Dr. Vaughan points out, that there is not only a reduction in the incidence of cholera among the inoculated, but that after inoculations

have been done in any community the incidence and death-rate among the uninoculated are, apparently, also reduced.

Professor Haffkine's notes on a series of experiments carried on in Calcutta show that the results, considered as a whole, were as follows :—654 uninoculated, 71 deaths (10·86 per cent.); 402 inoculated, 12 deaths (2·99 per cent.) Proportion, 3·63 to 1 ; reduction of mortality by 72·47 per cent. ; or for every 11 deaths amongst the uninoculated there were only three deaths amongst the inoculated.

An extract from the report of the Sanitary Commissioner with the Government of India for 1897 states that preventive inoculation against cholera was carried on in Bengal throughout the year, and 10,950 persons were operated on, mostly coolies on their way to the tea districts of Assam and Cachar. No complete statistics regarding the efficacy of the inoculations have been obtained, but the report says that such facts as were recorded are in favour of inoculation. The report of the same Commissioner for 1898 says, too, that "it any conclusion is permissible from such figures as are available it is decidedly in favour of the operation.

Respecting inoculation against typhoid, the correspondence shows that in 1897 the Government of India proposed to the Secretary of State for India that the inoculation treatment, strongly advocated by Dr. A. E. Wright, Professor of Pathology at the Army Medical School at Netley, should be tried experimentally on such British officers and soldiers in embarking for India as might be willing to submit to the operation. Owing to the diversity of opinion which then prevailed respecting the treatment, the Secretary of State for War was unable to assent to the proposal. It was understood in India, however, from the concluding portion of the letter from the War Office, that Lord Lansdowne's objection applied rather to the formal authorisation of inoculation at the public expense than to voluntary operations at private cost. The latter were, under this supposition, carried out at certain stations, though when the facts became known orders were given to stop further inoculations. The results, however, were so satisfactory that the Commander-in-Chief strongly recommended the adoption of the treatment in the interests of the health and efficiency of the British army in India. Over 2,000 men were inoculated, and in no case did any bad or unfavourable symptoms follow the operation. Only a very few (five or six) of those inoculated contracted typhoid fever subsequently, and, with the exception of one case, the disease was of a mild character, while in two of the cases the disease was in the stage of incubation when the operation was performed. In their letter to the Secretary of State for India, dated May 25, 1899, recording these facts, the Government of India say :—

"The annual admissions per mille for enteric fever amongst British troops in India have risen from 18·5 in 1890 to 32·4 in 1897, while the death rate has increased from 4·91 to 9·01, and we are of opinion that every practicable means should be tried to guard against the ravages made by this disease. The anti-typhoid inoculations have been, we believe, on a sufficiently large scale to show the actual value of the treatment, while the results appear to afford satisfactory proof that the inoculation, when properly carried out, affords an immunity equal to, or greater than, that obtained by a person who has undergone an attack of the disease ; further, the operation is one which does not cause any risk to health. In these circumstances, we are very strongly of opinion that a more extended trial should be made of the treatment, and we trust that your lordship will permit us to approve the inoculation, at the public expense, of all British officers and soldiers who may voluntarily submit themselves to the operation. We have already telegraphed to your lordship to this effect."

Enclosed in this letter was a communication from the principal medical officer to her Majesty's forces in India, saying, among other things :—

"From experiments which have been carefully made it has been conclusively proved to the satisfaction of those who are best competent to judge of the matter, that anti-typhoid inoculation, when properly carried out, achieves an immunity equal or greater to that which accrues to a person who undergoes and recovers from an attack of that disease."

The correspondence further shows that in August, 1899, the Secretary of State for India approved of the resumption of inoculation at the public expense, and that since then the measure has been widely resorted to, the Government of India having "hopes that the results will be satisfactory in securing some considerable degree of immunity, especially to young soldiers during the first years of their service." In a final dispatch, dated May 10, 1900, the Secretary of State for India informs the Government of India that he will "be glad to be furnished with returns, as soon as there are sufficient *data* available, showing the comparative prevalence and intensity of the disease among inoculated and uninoculated soldiers."—*The Times.*

TELEGONY, OR THE INFLUENCE OF A FIRST SIRE.

The truth or falsehood of the generally received opinions regarding telegony, or the influence of a first sire on the subsequent offspring of the same female, is a matter of very great importance to breeders of live stock, and deserves the most careful consideration. I am perfectly aware that the general opinion of almost all breeders of every variety of animal is in favour of the doctrine that a first sire more or less influences all subsequent offspring of the same female, whatever other sire he used, and consequently that what is called a pure-bred animal, one that if mated with a male of her own variety would throw pure-bred offspring, will, if by accident or design she has been mated in the first instance with an animal of another variety or breed, always produce offspring showing the influence of the first sire.

Some persons even carry this belief still further and think that the influence of a first mate extends even to the male parent, and an example has been cited recently by Professor Cossar Ewart of a Shorthorn breeder who was about purchasing a pure-bred Shorthorn bull who declined to complete the purchase when he heard that it had been running with a herd of ordinary cows. This Professor Ewart, possibly not unadvisedly, termed "telegony run mad."

The experiments that have been carefully and accurately made by scientific investigators have, however, failed in all instances to prove the truth of telegony. Prof. Ewart's experiments, the results of which were on view at the York Show of the Royal Agricultural Society, do not afford the slightest evidence of the truth of telegony. A number of mares that had borne offspring to a zebra, produced when subsequently mated with horses young animals not showing the slightest trace of the previous zebra sire. The late Mr. Romanes mated a number of white ducks with a black drake, one of a totally different variety. All the birds produced were parti-coloured mongrels. The next year these same ducks were mated with a drake of their own variety, and no trace of the previous sire was evidenced in any one instance. In the course of the many experiments that I conducted on cross-breeding for Mr. Darwin I paid not the slightest deference to the doctrine of telegony, and never had any evidence in its favour.

It may be asked, then, what is the cause of the almost universal belief that prevails with regard to it? I have

known breeders of valuable live stock kill an animal that had in the first instance met with a *mésalliance*, under the impression that for the future she would be perfectly worthless as a breeder of pure stock. And if the subject is started it will be met with scores of examples which are supposed by the relaters to prove beyond all question the truth of the doctrine of telegony. The editor of a paper devoted to horses recentiy protested to me against the breeding of mules in this country as a proceeding that would be likely to interfere with horse-breeding in England, as the mares would be subsequently infected with an asinine taint.

I need not recount the examples that are produced to prove the doctrine of telegony. They are innumerable, and scarcely any breeder but who will supply them. But the question is, will these examples bear the scrutiny of close examination, or are they, as the opponents of telegony state, merely instances of heredity or throwing back to previous ancestors?

It is believed by all scientific zoologists that the horse has descended from striped ancestors. It is known to sportsmen and naturalists that animals inhabiting woody countries are much less liable to observation when they are striped or spotted. Those that are of a uniform colour are more readily observed, and would be more liable to be destroyed by beasts of prey, whilst the striped animals would remain and propagate their own variety. The truth of this observation may be ascertained by painting an ordinary self-coloured pony with white strips, when at some distance, if lying down, especially in the neighbourhood of woody covert, he is practically far less visible than one that is of a self colour.

When the horse migrated to open plains the stripes were no longer of utility, and they consequently disappeared, but they are always liable to recur. Professor Ewart had at York a striped pure-bred Arab neither of whose parents had ever seen a zebra; nevertheless this was striped to so great an extent that had it been produced by a mare that had previously borne a zebra hybrid it would have been regarded as an irrefragable proof of the doctrine of telegony. Another of his remarkable examples was a litter of kittens. These were bred from two white parents, brother and sister, that had been closely shut up from their birth in a separate pen, they themselves having been bred from white parents, but one of their previous ancestors was a tabby. The litter of kittens consisted of two purely white animals and two pure tabbies. Had this white cat borne a litter to a tabby cat before being mated with her white relative no stronger proof could have been desired by any advocate of the influence of a first sire than the production of these two tabby kittens, and yet it would have been perfectly fallacious.

The doctrine of telegony, singular to relate, is not believed in by medical men nor by the public at large, as regards the human race. No man who marries a widow expects that his children will resemble those of her first husband either in form or feature, and yet they should invariably do so if there were any truth in the universal belief of the influence of a first sire. Anatomically and physiologically considered, there is no evidence whatever in its favour, nor can any instances be adduced in support of it in the numerous examples which occur of the mingling of black and white races of mankind in different parts of the world. It may be thought that the discussion on this subject is out of place in *The Live Stock Journal*, but the importance of ascertaining the truth of the matter must commend itself to all stock breeders.

A correspondent has kindly furnished me with the following particulars regarding the thoroughbred mare Merrie Lassie, the property of H.R.H. the Prince of Wales. She is the daughter of Lassie by Blair Athol, and Lassie had a foal by a cart horse the year before Merrie Lassie was born. As Merrie Lassie is the dam of good winners, it is evident that her dam Lassie did not retain any ill effects from the carthorse impregnation, which she would have done were the belief in telegony founded on facts.

W. B. TEGETMEIER.

—*The Live Stock Journal.*

PROFESSIONAL ORGANISATIONS.

By W. G. DICKINSON, M.D.

"EVERY MAN IS A DEBTOR TO HIS PROFESSION."

Taking the axiom laid down by Lord Bacon as a text, the author dealt with the subject of organisation from the point ef view that "one great means of discharging that debt is to do something towards arousing the profession from the apathy and disregard of its own interests by which it is generally characterised. What is the justification for the significant silence or the covert sneer with which any allusions to professional interests are so often met by the average well-to-do practitioner? Is he so engrossed by his own personal interests that he cannot find time for the consideration of those matters which may be injuriously affecting the profession generally? I should be sorry to think so ill of him. He usually excuses his neglect by indulging in personaalities: "A. B is a bad lot"; "C. D. is a windbag"; "Who would ever pay attention to E. F.?" Well, gentlemen, if this is so, is it not the obvious duty of our well to do practitioner to come forward and show A. B., C. D., and E. F. a more excellent way? In a recent article on the British Medical Association it was stated that "no member of the profession has a right to say that he takes no interest in what are called "medical politics,' by which we understand the maintenance of the honour and the interests of the medical profession, and the consolidation and extension of its influence on public opinion and on the course of legislation in matters touching the public health, and the scientific and social interests of the profession itself. The real source of many of the disadvantages under which the profession in this country still labours is traceable to the apathy of many of its members, who cannot be roused to take a share in the determination of matters which lie a little outside the absorbing calls of actual practice or of clinical work." This has been said so often that it has become a truism, and it is a painful fact that this should be so. Is everything for the best in this best of all possible professions? Do we as a body need no remedies? Do all things go well with us? Ask the treasurers of the various professional benevolent societies and hear their reply.

NEGLECTING A WOUNDED HORSE.

Ralph Williams, tradesman, Daisy Hill, Buckley, and Francis Kent, farrier, Penyffordd, were summoned at the instance of the R.S.P.C.A. for causing a horse to be ill-treated. Mr. J. B. Marston, for the prosecution, said a horse belonging to Mr. Williams was injured about April 25th, and it was attended by Kent, who is a quack farrier. He was not a qualified veterinary but practised as such. This horse was turned out in a field in July when the weather was fearfully hot. It had injured its off hind leg between the hock and the fetlock joint, and there was an open suppurating wound about the size of the crown of a man's head, with a lot of proud flesh about it. The animal was in this field in the blazing sun, and there were myriads of flies settling upon the wound. The animal was hopping about on three legs and the flies were

teasing it. The horse had been enduring this agony for many weeks.

Inspector Blake Jones said the animal was a black gelding colt, and when he saw it on July 25th it was standing on three legs. The leg was swollen to twice its normal size between the hock and the fetlock. The wound was as large as the crown of a person's head, and had a growth of proud flesh standing out most prominently, and flies were swarming in the open part. That day the temperature in the shade was 83. He saw defendant and described the condition of the animal to him, and he said "I have no doubt it is in pain." He admitted that the animal had hurt its leg 13 weeks before.

P.S. Langdon (Buckley) deposed to having previously warned the defendant, and a witness named Martin said he had seen the animal in the field in the condition described.

Mr. T. J. Simpson, M.R.C.V.S., Ruthin, said he examined the horse on July 28th and and found on its off hind leg a fungus growth. The horse ought never to have been turned out to grass at all. A wonnd of that description ought to have been put under antiseptic treatment at once, and then there would not have been this growth. The fungus growth was due entirely to neglect.

Mr. F. B. Mason, Chester, for the defence, contended that the case ought not to have been brought into court, and that it had been exaggerated from the start. Mr. Williams did all he could to save the animal pain. When the wound was discovered the animal was turned out to graze, its shoes were taken off, and it was not worked.

The defendants gave evidence, Kent stating that when he saw the animal at first the wound was exposed right down to the bone.

Mr. F. G. Edwards, veterinary surgeon, Chester, said he saw the animal on July 30th. He did not think the animal had been caused any unnecessary pain.

The Bench fined each defendant 10s. and costs.—£2 0s. 9d. each.—*The Chester Courant.*

DIPHTHERIA IN THE HORSE.

By Lousis Cobbett, M.D., Camb., F.R.C.S., Eng.
(*From the Pathological Laboratory, Cambridge*).

On May 22nd, 1900, Dr. A. Mearns Fraser, the medical officer of health of Portsmouth, sent to this laboratory a culture of a bacillus which he had obtained from the nasal discharge of a pony and which had appeared to him to be identical with the bacillus of diphtheria. The history was as follows. A little girl having fallen ill of diphtheria Dr. Fraser, while seeking the source of the infection, found that a pony belonging to the child's father was ill with a purulent and slight sanguineous discharge from its nose. Subsequently the animal suffered from enlargement of the glands under the tongue and laryngeal obstruction, with difficulty of breathing and retraction of the abdominal wall, and a bacillus obtained from the nasal mucus having been pronounced morphologically indistinguishable from the diphtheria bacillus the animal was killed.

The bacillus which I isolated from the culture sent to me had the usual appearance and habit of growth of the bacillus diphtheriæ. It belonged to the short variety. It did not liquefy gelatin, it formed acid in media containing glucose, it clouded beef broth and subsequently cleared it, and, like many diphtheria bacilli freshly isolated from man, it formed only a scanty film on the surface. It was pathogenic to guinea-pigs, causing local hæmorrhagic œdema and the general symptoms which are seen in these animals when they are inoculated with the bacillus diphtheriæ. It formed a powerful toxin, the filtrate from broth cultures causing a little œdema at the seat of inoculation, followed in about 10 days by falling out of the hair in the neighbourhood, widespread hæmorrhagic œdema and necrosis of the tissues immediately affected, or death, occurring sometimes within 24 hours, according to the quantity of poison injected. The effect of injecting large doses of living culture, or even 100 fatal doses of filtrate was completely neutralised by diphtheria antitoxin.

Experimental inoculations in guinea pigs are detailed, and Dr. Cobbett continues :—

These experiments put it beyond doubt that the bacillus obtained by Dr. Fraser from the pony was a true diphtheria bacillus ; and I think we may conclude —though at present there is but a single observation— that the horse is liable to nasal and laryngeal diphtheria. The discovery is of practical importance, since it points out a hitherto unsuspected channel by means of which the infection may be carried to man. It is of scientific importance also, because it has a direct bearing on the question of the origin of antitoxin. As is well known the serum of normal man, both adult and infant, and that of the horse which has never been immunised with the diphtheria bacillus or its products, have often the power of neutralising diphtheria toxin ; and it has been shown, in the case of the horse at least, that this protective serum unites with toxoids as well as with toxin proper, just as does the serum of an immunised animal —that, in a word, it contains true antitoxin. The diphtheria antitoxin found in man is probably due, as A. Wassermann has suggested, to some previous attack of diphtheria, possibly unrecognised, while that found by Fischl and Wunsheim in the placental blood of infants may have been derived from mothers who had had the disease. Now that the horse had been found to suffer naturally from diphtheria the presence of diphtheria antitoxin occurring naturally in this animal is easily explained.

Professor Ehrlich, however, has suggested another explanation of the natural occurrence of diphtheria antitoxin in man and horses which brings this fact into harmony with his most interesting *Seitenkette* theory of the origin of antitoxin. His argument may be shortly stated as follows : Foodstuffs must of necessity have a chemical affinity for some part of the substance of the cells which they nourish. He assumes that the molecules of the cells have "side-chains," and that the molecules of the food have "haptophoric" groups of atoms, by means of which they bind themselves to these side-chains of the cell-molecule. The bacterial poisons and certain other poisons, such as venom, recin, abrin, &c., also have "haptophoric" groups of atoms in their molecules which enable them to bind themselves to the molecular side-chains of the cells which they destroy. Now the living cells do not possess special kinds of molecular side-chains merely that they may be susceptible to the action of certain poisons ; but it happens that the binding groups of each of these poisons are identical with the bindlng groups of some particular food-stuff, so that the poison is able to act by seizing on to a side-chain hung out, so to speak, to catch food. Experiment has shown that the injection of these toxins, or even of their binding groups alone (toxoids) into animals causes the appearance in their serum of a specific antitoxin ; and that the injection of certain food-stuffs also, such as globulin, peptone, etc., produces specific anti-bodies (precipitins) strictly analogous to the antitoxins, in the serum of the animals injected. From this it may be inferred that the injection of a food stuff which has binding groups identical with those of a certain poison ought to produce the same anti-body as the injection of the poison itself. Thus Ehrlich suggests that diphtheria antitoxin in apparently normal animals is present as a consequence of the assimilation of some food-stuff which has the same binding groups as diphtheria toxin.

I do not wish to enter into any general discussion of,

much less to attack, the *Seitenkette* hypothesis, which knits together, and is supported by, so many observations; but I must point out that the fact that the horse may suffer from diphtheria suggests a much easier explanation of the occurrence of diphtheria antitoxin in this animal than that put forward by Ehrlich. Moreover. the fact that all horses do not possess this natural antitoxin is more consonant with the view that it is present in those which have accidentally contracted the disease than with that which attributes it to the assimilation of a certain food, seeing that the food of all horses is so nearly alke. It is hardly necessary to mention that up to the present time no food-stuff has been found the injection of which will lead to the appearance of diphtheria antitoxin, and, so far as I can ascertain, no normal animal, with the exceptions already mentioned, possesses an anti-toxin of any kind in its blood.

The fact that diphtheria antitoxin is present in many horses * in this country and on the continents of Europe and America suggests that diphtheria is a common disease among these animals ; and this is in accordance with the well known susceptibility of some of them to the action of diphtheria toxin. It is therefore possible that the horse may be found to play a not inconsiderable part in the transmission of diphtheria.

* Dr. Meade Bolton found it in three horses out of 12 examined by him in Philadelphia. I found it in nine out of 13. Of these 10 came from London and eight of these possessed an antitoxic serum, while the other three lived in Cambridge, and the serum of one only had an antitoxic action. Thus in a limited experience it was present in 80 psr cent. of London horses and in only 33 per cent of Cambridge horses. This corresponds with the much greater frequency of diphtheria in London than in Cambridge. Of course if I had examined another Cambridge horse and found antitoxin the percentage of those containing an antitoxic serum would have jumped to 50. One must, therefore, not attach much importance to this ratio. Moreover, in Meade Bolton's experience antitoxin was present in only 25 per cent. of Philadelphia horses, and diphtheria is twice as common in that town as it is in London.—*The Lancet.*

DISEASED MEAT—FARMER FINED.

An important prosecution by the Halifax Corporation under the Public Health Act, was heard at the Halifax Borough Court on Tuesday, August 21st. Fred Wade, farmer, etc., of High Lees Farm, Mixenden, being summoned for depositing on his premises for the purposes of sale 194 pounds of beef which was unfit for human food. The Magistrates on the Bench were Mr. Joe Shoesmith (in the chair), Councillor R. Kerr, and Councillor W. H. Spencer.

Mr. Tordoff, from the Town Clerk's office, said that on June 22nd, in consequence of certain information, the inspector's called at the defendant's farm. Wade was out at the time, but his wife and son were present, and on telling them their errand, the latter took the inspectors into the wash kitchen. There they found four pieces of beef on the table, consisting of the quarters, less the shanks and flanks, and weighing 194 pounds. It was found to be in a very bad condition indeed. It was diseased, and chiefly infected with tuberculosis. The flesh was emaciated, and entirely unfit for food. The inspectors seized the meat, and put it on a cart in order to take it away, when the defendant came up with his wife, who had gone to meet him, evidently to tell him what was taking place, and said that if the meat was taken away, he should want paying for it. He said there was nothing wrong with it, the animal having been killed because it was lame. Mr. Tordoff said the defendant must have known the condition of the beast. It was in such a state as to show signs of the disease when alive. The Medical Officer would tell them that the animal when destroyed was actually at the point of death from the disease. The pleura had been stripped off to remove traces of the disease, which had actually eaten into the ribs. A considerable portion of the meat had been sold by the defendant to a butcher in Halifax, who had also been dealt with by the Court for exposing it for sale.

Inspector Crawshaw said that the stripping off of the pleura, in his opinion, proved that the defendant was aware of the condition of the meat. He saw the offals in the shop of Sam Garth, butcher, in Battinson Road. The defendant was a dealer in fallen cattle, a horse slaughterer, a milk dealer, and farmer.

Defendant : I think it very hard to have it taken away from my own house. I asked the inspector what tuberculosis meant, as I did not understand it.

Dr Whitcombe, acting medical officer, produced a photograph of the meat, showing the nodules. He said there was a peculiar soapy feeling about the meat. There were traces of inflammation, and almost every part was infected. One of the ribs had been eaten into by a large nodule.

The Chairman : Can you bring any evidence that the defendant must have known this ?

Mr. Tordoff : There is the fact that the pleura had been stripped off.

Dr. Whitcombe : When foreign meat is landed in this country and the pleura stripped off, it is sufficient to condemn the whole carcase.

Mr. P. M. Walker, veterinary surgeon, who also examined the meat, said it was bad in colour as a result of being badly bled, either owing to high fever or long travelling. The meat was soft and soapy and emaciated to a degree. There was not a single trace of fat in the whole four quarters. The disease in his opinion was of long standing. A non-expert could have told the animal was diseased.

Samuel Garth, butcher, Battinson Road, stated that on June 22nd, Inspector Crawshaw seized some meat at his shop. This he had had sent by the defendant. He met the defendant in the street. Wade said he had killed a little heifer of his own, and asked him if he could do with the offals. Witness agreed to have them, and they were sent with the flanks and shanks, in his absence. He did not see the meat until after the Inspector has seized it. He had said nothing to the defendant, nor had they agreed to a price.

Defendant, who pleaded guilty, said he had always been a respectable man up to now. He had been a farmer twenty-five years, and never had anything of the sort before.

The Magistrates' Clerk : Have you any excuse to give about it at all ?

Defendant : I had never sold any of it. It was all my own.

The Magistrates' Clerk : This man Garth had a portion of it.

Defendant : Yes, but he did not see it. I never received any pay for it.

The Magistrates' Clerk : What were you going to do with this meat ?

Defendant : I should have eaten it all myself.

The Magistrates' Clerk : What, the whole lot ? (Laughter.)

Defendant : Well, we have a lot of big lads, and they can eat a stone. (More laughter).

The Chairman pointed out to defendant that, according to Dr. Whitcombe and Mr. Walker, the meat was utterly unfit for human food.

Defendant : It didn't look so to me. I am not a doctor.

The Magistrates' Clerk : But you have been a dealer in cattle, you say, for over twenty years.

Defendant : Yes, but I never dressed a cow in my life.

The Bench retired to consider their decision. On

their return, Mr. Shoesmith stated that they had retired, not because they had any doubt as to defendant's guilt. but to discuss whether they should send him to prison without the option of a fine. There was an impression in the minds of one or two of them that the seriousness of the offence would have warranted them in adopting that course. However, a more merciful view had been taken, and defendant would be fined £20 and £1 16s. 6d. costs, or distress, or in default two months' imprisonment. The money was straightway paid.—*The Halifax Guardian.*

A WARNING TO WOULD BE PRACTICE SELLERS

Alleged Misrepresentation.

David McGill brought an action to obtain compensation from Arthur and Mary Gibson for alleged fraudulent misrepresentation in the sale of a business. Mr. H. Y. Stanger, Q.C., and Mr. H. J. Rowlands (instructed by Messrs. Rowlands and Co.), appeared for the plaintiff, and Mr. Hugo Young, Q.C., and Mr. McCardie (instructed by Messrs. Jaques and Son) for the defendants).—Mr. Stanger explained that Mr. Gibson, whose personal representatives were the defendants, was a veterinary surgeon at Priory Hill, Birmingham. In February, 1898, he died, but the business was sold previously to his decease, and it was in connection with that sale that the present action was brought.—Mr. McGill alleged that Mr. Gibson made a false representation to him with reference to the amount of his receipts and his net profits. In consequence of his representations plaintiff was induced to give more for the practice than he would have done otherwise. In September, when the negotiations were first entered into, plaintiff was living in London, and was told the reason why Mr. Gibson was desirous of selling was on the score of ill-health. A statement of the takings for 1894-95-96 was prepared, giving the figures for the respective years as £3,356, £3,443, and £3,732. The detailed statement showing the totals for each week, and these were found to agree with the weekly statement of the cash book supplied for the plaintiff's inspection. The net profits were given at about £1,000. Eventually plaintiff decided to take the business, and paid £1,000 as one year's profit for goodwill, and agreeing to pay £500 for the stock, on the proviso that if the latter was of less value an abatement should be made. After an examination the amount for stock was reduced to £250. Instead of making £1,000, he only made £150 in three months, and in two years less than £300. He then made a careful investigation of the books, and it was alleged that some of the entries of the receipts were not payments by customers, but payments which Mr. Gibson had made to himself by drawing a cheque on his own account on the bank, and other items were payments on account of property at Manchester; these amounts were said to be £714 in 1894; £831 in 1895; and £995 in 1896. Plaintiff also discovered that book totals were made up by cash balances brought forward week by week, while he was not told that certain contracts had expired before he purchased the business.—The plaintiff declared that he had done everything possible to keep up the business.—In cross-examination, he admitted, however, that a popular horseshoer who had left him had taken away some of the work. A former clerk of Mr. Gibson's said he was told to give the plaintiff all necessary information. "Of course," he added, "I was in Mr. Gibson's employ then, and it was not for me to open my mouth and speak." (Laughter.)—For the defence, Mr. Young submitted that there was no fraudulent misrepresentation on the part of Mr. Gibson, and if there was any mistake in the accounts it was settled during his lifetime, and returned £250 as an absolute settlement of the whole matter, and not on the question of stock merely. As for the books, they did not profess to refer to receipts merely in the business, but were cash books showing all the cash received and paid by Mr. Gibson.—Mrs. Gibson said that during her husband's lifetime they lived at the rate of about £900 a. year, and they always paid their way. Her husband had no other source of income but his practice.—Messrs. Jaques (solicitors) said it was understood that the return of the £250 was in full settlement of the dispute.—The jury, after retiring, found a verdict for plaintiff, assessing the damages at £400 and costs.—*Birmingham Daily Mail.*

"SOFT PORK"—WHAT CAUSES IT.

As bacon figures largely in the exports from the Dominion of Canada, the investigations now in progress into the cause of "soft pork" are of high practical importance. The fat of bacon or pork consists really of three distinct fats—olein, palmitin, and stearin. At ordinary temperatures the last two are solid, while olein is fluid. It is an increased percentage of olein that gives to soft pork its peculiar and characteristic flabbiness. The question arises as to whether the excess of olein can in any way be associated with the kind of food and the system of feeding. At the Central Experimental Farm at Ottawa about 180 pigs, between six and eight weeks old, were put under experiment. They were all Tamworths or Tamworth grades. As the animals were from time to time killed, the fat taken over the loin and above the shoulder were subjected to analysis, the nitrogenous tissue being estimated, as well as the percentage of olein in the fat proper, and the amount of moisture, whilst the melting point of the fat was taken. One feature of the scheme is the examination of pigs of different ages from two months to eight months. In immature pigs, as these may be termed, the fat is invariably found to be more or less soft, the percentage of olein usually being large. This appears to be the normal condition of the fat of young pigs, as it occurred with all kinds of feeding that were tried. Some were fed on maize entirely, and some on mixtures of barley, oats, peas, etc., the object being to find out what qualities of pork resulted from the various feeds. It will probably be found that, in order to obtain bacon of the first quality, even with the most suitable rations, a certain age must be attained before slaughtering. Ripeness or maturity would seem to be an essential factor to this end, and the practice of excessive feeding from the start so as to obtain finished hogs at six or seven rather than at nine months old is one that it may perhaps be found necessary to deprecate. The scheme of feeding included the use of maize, both dry and soaked, and a mixture containing equal parts of ground barley, oats, and peas. These were fed in various ways, alone and in mixtures, and in some cases the diet was changed after the animal had reached a weight of 100lb. Pending the conclusion of the investigation it appears warrantable to state that a diet consisting exclusively of maize meal results in a poor quality of pork, the fat containing too much olein. Again, where beans form the larger portion of the ration the pork will be more or less soft; in all of ten pigs under the bean diet the fat showed a large proportion of olein, but the fat was not so soft as in the maize-fed animals. Further, it appears that pork of excellent quality can be obtained from the mixed ration of equal parts of barley, oats, and peas. The question has yet to be decided as to the proportion of maize meal that can be used in a ration without endangering the quality of the pork, and the stage in the growth of the animal at which maize should be fed if firm bacon is to result. Other matters receiving attention relate to locality, exercise, and the feeding of green stuff, clover, and roots. Incidentally, some evi-

dence was adduced concerning the excellent effects of including mangels in the food of bacon pigs, the roots being given whole to the animals in order that they may scoop them out themselves. A grain mixture of equal quantities of barley, oats, peas, and maize, with an allowance of mangel up to 13lb. per head per day, is highly spoken of, but the effects of mangels on the quality of pork has yet to be ascertained.—*Times.*

CHINESE "MEAT" TRADERS.

We all know that the ways of the Chinese are many and peculiar; but at this particular moment, when the newspapers are full of news—or lack of news—from the Celestial Empire of the Sun and Moon, it may not be uninteresting to tell the meat traders of Great Britain a little about their colleagues in the very far East. It will have to be very little, for all things Chinese are more or less obscure. The Chinese butchers are not a little bit like British butchers. They have no trade Associations, sad to say; they have no *Meat Trades Journal*, sadder to say! An excellent summary of the Celestial butcher would be this: He is the exact reverse of other butchers. The Chinese, however, is not harassed by legislation, for the very good reason that there is no legislation in China. When China is brought up-to-date and has her Minister of Agriculture, then the troubles of the butchers will begin. It is in this respect only that the British butcher will envy the Chinese butcher. The staple food of the Chinese is rice; but there is a fairly good demand for meat on the part of the middle class and wealthy masses of the community. In his excellent book on "China," published by the Society for Promoting Christian Knowledge, Professor Douglas refers to the disinclination of some people to eat meat owing to the influence of Buddhism, which teaches the doctrine of the transmigration of souls. Devout followers of this sect naturally avoid partaking of the flesh of any animal which might possibly have been their dearest friend or relation in another form of existence. This, in a sense, is the reason for the multitude of vegetarians in China. Our own vegetarians live on green stuff and monkey nuts because such diet is cheaper than honest English roast beef. If the Chinese butchers are not, proportionately, very numerous they can call upon the public to Buy, Buy, Buy! a more varied collection of eatables than any British butcher can hope to do. The cat and the dog and the rat are all suitable things for the butchers' blocks, and the choice bits of cat, dog and rat are always hung outside the shops in conspicuous manner so as to attract the attention of the epicurean. We have read a deal about the Chinese just lately, but have not come across a butcher's price list. Professor Douglas, however, quotes a typical bill of fare of an eating-house:—

Cat's flesh, one basin	10 cents.
Black cat's flesh, one small basin	5 „
Wine, one bottle	3 „
Wine, one small bottle	1½ „
Congee, one basin	2 cash.
Ketchup, one basin	3 „
Black Dog's Grease, 1½ oz.	4 cents.
Black Cat's Eyes, one pair	4 „

"All guests dining at this restaurant are requested to be punctual in their payments."

There's variety for you! Of course, certain breeds of cats and dogs are in great demand, as being more nutritious than other, and therefore the butchers charge accordingly. As we have our lamb season, so the Chinese have their dog season, for it is the custom in some parts of the country for the people to eat dog "to fortify themselves against the coming heat." At present the Chinese look like having a warm time so that the butchers there must be putting up the price of dog. Another indication of the class of business done by the butchers of China is provided by Mr. Giles in his "Chinese Sketches," who prints this menu of a high-class dinner:—

Sharks' fins, with crab sauce.
Pigeons' eggs, stewed with mushrooms.
Sliced sea slugs in chicken broth, with ham.
Wild duck and Shantung cabbage.
Fried fish.
Lumps of pork fat fried in rice flour.
Stewed lily roots.
Chicken mashed to pulp, with ham.
Stewed bamboo shoots.
Stewed shell fish.
Fried slices of pheasant.
Mushroom broth.

Remove.—Two dishes of fried pudding, one sweet, one other sort.

Sweetened duck.
Strips of boned chicken fried in oil.
Boiled fish, with soy.
Lumps of parboiled mutton fried in pork fat.

The most fastidious person ought to be able to choose one dish to suit his palate out of this extraordinary list. The idea of all these varieties seems to be the desire to please everybody, for the Chinese consider that from the heart and the pit of the stomach all ideas of delight proceed. What a galaxy of delight the aforementioned menu must bring!

The Chinese, we have been given to understand, though for the moment we cannot quote our authority, are the poineers of roast pork. In olden times the pig was in bad odour (as indeed he still is), and no one would venture to eat him. It so happened that a Chinaman, who kept a pig, got burned down one day and the pig was roasted. The people who came to see the ruined building were fascinated by a charming odour; it was the odour of the roasted pig. Eventually one brave Chinaman tasted a bit of crackling, and before long all present tasted crackling and soon consumed the pig. The fame of roast pig spread appropriately enough, like wildfire, and since that day roast pig has been regarded by all nations as something worth eating. The Chinese, however, did not at first recognise that an ordinary fire would roast the snceulent pig, so they began to put a pig in an outhouse and set fire to it just to get roast pig. These fires were beginning to cause some alarm, when an enlightened Chinese came forward to explain how pigs could be roasted without roasting houses as well.

The frog is regarded as a tasty entrée, and no butcher is fashionable who has not got a good dishful on display. —*Meat Trades' Journal.*

APPOINTMENTS AT THE CAPE.

Attorney-General's Office, Cape Town,
Cape of Good Hope, 9th August, 1900.

His Excellency the Governor, with the advice of the Executive Council, has been pleased to appoint

* * * * *

5. The following Colonial Veterinary Surgeons for the several Districts of the Colony:—

(1) Harry Tennison Armstrong, M.R.C.V.S.
(2) John Dowie Borthwick, M.R.C.V.S.
(3) Duncan Charles Campbell, M.R.C.V.S.
(4) Rowland William Dixon, M.R.C.V.S.
(5) George William Freer, M.R.C.V.S.
(6) Marson Atkinson Hutchence, M.R.C.V.S.
(7) William Robertson, M.R.C.V.S.
(8) John Andrew Robinson, M.R.C.V.S.
(9) James Spreull, M.R.C.V.S.

JOHN J. GRAHAM,
Secretary to the Law Department.

THE CYPRUS SPHALANGI AND ITS CONNECTION WITH ANTHRAX.

(CALLED LOCALLY "SPHALANGI BITE."

By George A. Williamson, M.B., C.M.Aberd.

The so-called sphalangi of Cyprus is an insect, in general appearance resembling an ant of medium size. The body is divided into three segments, the head and the thorax being dull red in colour, and each about half the size of the abdomen, which latter is black, marked with spots or bands (amalgamated spots) of yellow. The abdominal segment in some carries at its extremity an elongated process, the "sting." Others do not have this process. The sting-bearers are apparently the females, the sting being a modified ovipositor. Those without stings are males. The length of the insect is one-third to one-half an inch, and the whole body is covered with fine hairs, visible under a magnifying glass. These hairs appear important, as they may carry infective material, for example anthrax spores, to an abraded surface. In early summer winged individuals are met with. All seem to lead a semi-subterranean existence and to be omnivorous, with, if anything, a preference for foul material. The sphalangi is met with only during the hot weather, from June to November.

Identification, etc., of the Sphalangi.

The insects all belong to a genus of *Aculeati* (sting-bearing) *Hymenoptera* called *Mutille*. The species are scattered over the world, especially in warm countries, and there are probably a good many species in Cyprus.

Belief as to Effects of "Sphalangi Bite."

It is firmly believed throughout the island that the sphalangi can sting or "bite" (as the literal translation of the Greek word makes it), and that the effects are generally serious and may be fatal; many cases are on record, and deformities as the results of the sting are frequently met with. I was unable to accept the story that the sting of itself could cause such terrible results, and subsequent experience of cases has led me to what seems to be the correct explanation of the injuries caused by the sting.

Existence of Anthrax.

Before going further I should like to point out that the disease known in the island as "phlangari" in sheep is really anthrax. This I have no hesitation in stating, having examined the blood of animals suffering from phlangari, and finding it crowded with unmistakable anthrax bacilli. I have also found the disease in horses, two cases, both fatal. Unfortunately the carcases of animals dying of phlangari are too often left to lie where the animal died, the skin being removed.

Symptoms of a Typical Severe Case of "Sphalangi Bite."

The patient, Aspasia Nicolaon, aged 50, was sent to me on September 22nd, 1899. On the night of September 18th, while sleeping on a trestle bed placed against the wall in the yard of the house, she was wakened by feeling at the right temple a pain like the prick of a needle; she at once concluded that she had been bitten by a sphalangi, especially as there were many insects on the wall. On getting up in the morning she noticed a small pimple at the spot where she had felt the pain during the night—she was sure this pimple had not been there when she went to bed. Swelling rapidly set in till both eyes became closed. The central eschar was very slightly raised, dark brown, and about the size of a sixpence, having a slight clear odourless discharge. Ten small secondary vesicles were counted round the eschar; the swollen parts were indurated, not "boggy."

On microscopical examination of the discharge large numbers of anthrax bacilli were discovered, as well as numerous lymphocytes.

The treatment adopted was cauterisation by thermo-cautery and the injection hypodermically at different spots round the eschar of a solution of mercuric chloride and potassium iodide in water.

The case went on to complete recovery.

Source of Infection.

The source of infection here appeared to be a sheep, which died of phlangari, and whose carcase had been thrown, a week before Aspasia Nicolaon took ill, into a field adjoining the yard of the house she occupied. The woman had not been engaged on any work, such as hide dressing, etc., by which infection might have been got.

Remarks on Other Cases.

Mehmed Ali Bilal, was in hospital in July, 1899; he actually felt the sphalangi on his face, and the swelling, which began almost at once, became severe next day. It is interesting to learn that during the week preceding his illness two of his sheep died of "phlangari." Unfortunately he allowed eight days to elapse before he presented himself at hospital, so that Dr. Cleveland (under whose care he was) had great difficulties to contend with in the treatment, and the delay probably accounts for the severe ectropion and loss of sight from which he now suffers. He declined to have the ectropion operated on.

A similar case, ending in severe ectropion also, occurred at the same time in the same village, and probably due to infection from the sams carcass of sheep as in Mehmed's case; here, after some weeks' suffering, the patient recovered. She ascribed the disease to the bite of phalangi sustained while she was sleeping in the open at night.

A few other cases came under my notice, but were not so marked as the foregoing.

Simple Sphalangi Sting.

Three cases where the persons were supposed to be bitten by sphalangi were also observed (in one of which the insect was actually picked off the face) where the resulting symptoms were slight or, in other words, such as one would expect to find from the sting of an insect like the *Mutille*. One of these cases is of sufficient interest to be quoted—a woman came in a great state of fear, saying that she had been bitten by a sphalangi the night before while collecting brushwood in her yard (the brushwood had no prickles); she said that she saw an insect like a sphalangi run off her hand after "biting" her, but, it being dusk at the time, she could not describe its appearance more accurately. On the back of the hand a dark red spot about the size of a threepenny piece was distinctly evident and round this the hand was swollen and red up to the wrist; the arm was tightly bound with a piece of cord in the hope of stopping the spread of inflammation—on microscopical examination of the exudate no bacilli were to be discovered and I ventured to tell her that, by applying carbolic fomentations, she would be well in a day or so, as, indeed, happened.

Reasoning on these cases the conclusion seemed justifiable that the sphalangi sting in itself is no serious matter, but if at the same time anthrax is inoculated the results may be very serious indeed, and perhaps a fatal issue may ensue.

Diagnosis.

To distinguish between these two conditions (simple sting and inoculation of anthrax), a microscopical examination appears to enable one to come to an absolutely sure decision, as shown in the last-mentioned case, which

had all the external appearances that one would expect to find about ten hours after the inoculation of anthrax by the sting.

Time when Sphalangi is Found and "Sphalangi Disease" Occurs.

Sphalangi are found and cases of sphalangi disease occur only during the hot months of the year, when also "phlangari" is most prevalent. This concurrence seems important as pointing to a connection between the three; and the fact that the sting has generally happened to persons while they have been sleeping in the open suggests the idea that their instinctively, before properly awake, trying to rub off the insect, whose movements on their face or other exposed parts they have felt, is regarded by the sphalangi as an attack, to be met by its only means of self-defence—its sting.

Advantages Resulting from Identification of Sphalangi, etc.

I venture to claim that the beneficial results from a clear recognition of the sphalangi and its power of causing inflammation and transferring diseases are the following:

1. By the recognition of the anthrax bacillus in cases which are typically "sphalangi disease," it is now certain that the disease is anthrax.
2. Being sure, by the discovery of the anthrax bacillus, of the nature of the disease, the correct treatment may be at once begun.
3. By the microscopical examination of the exudation at the seat of inoculation a certain diagnosis is without difficulty made.
4. Greater certainty in prognosis is possible the cause of the disease being known.
5. The certainty with which, in the absence of anthrax bacilli in a supposed case of "sphalangi disease," the patient may be told that no serious results will follow.
6. The explosion of the idea, which caused so much fear amongst the people generally, that in Cyprus an insect existed having such a powerful poison in itself as that attributed to the sphalangi.

Conclusion.

In a few words, the explanation I offer of the nature of sphalangi disease is as follows:—The severe symptoms are due to anthrax which has been inoculated by the sphalangi's sting, or by the insect carrying on its body (probably on the fine hairs) anthrax infective material to an abraded surface, the sphalangi being a foul feeder, and carcases of animals dying of "phlangari" (anthrax) being too often left exposed or buried without precautions being taken to prevent the spread of the disease.—*The British Medical Journal.*

HOW THE PLAGUE IS SPREAD.

In the last report of the Medical Officer to the Local Government Board (Sir R. Thorne Thorne), there are some remarks on the spread and prevention of the plague which may be read with interest as indicating the views likely to guide the policy of Government officials in dealing with the matter. He says: The recognised prevalence of plague in one and another place or country is often set down to infection conveyed by means of clothing, and of other articles that are imported from an infected district. It must be admitted that certain articles, notably clothing, bedding, etc., which have been in contact with the sick, may unquestionably serve as vehicles for the communication of the infection of plague, and it is of the utmost importance that such articles should always be either destroyed or efficiently disinfected. But, as the result of increasing knowledge as to the methods by which the infection of plague is communicated from one place to another, I have no hesitation in venturing to assert that the individual who suffers from Pestis minor or Pestis ambulans, and whose movements no one has found cause to control, is an infinitely greater danger as a vehicle of infection than even infected clothing; and this especially when it is a question of conveying the disease to a hitherto healthy country. Here, again, we have the analogy of our current infectious fevers, such as scarlatina, the communication of which was formerly so often set down to the retention of infection for almost untold periods in odd pieces of rag or flannel which had at some time or another been seen in the hands of a scarlatina patient. Now, however, we have come to learn that one of the commonest methods of infection of this disease is, not a piece of clothing or a few scales of effete epithelium, but a recrudescence, during convalescence, of the disease itself in the form of a recurring throat malady which is often so trivial as to escape detection. In brief, even more importance attaches to an investigation into the clinical features of comparatively recent, though perhaps obscure, attacks of such diseases, as a cause of further mischief, than to the discovery of some chance of a remote infection through some indirect channel.

Plague in Relation to Merchandise.

Some nations and persons have, in sheer panic, attempted to impose almost universal prohibition on the importation of all articles from countries where plague prevails; and in their most pronounced form these attempts have, in so far as the interests of this country are concerned, culminated in occasional suggestions to prohibit the export of grain from plague-infected ports, or to destroy cargoes of grain, such as corn and rice, when carried by a vessel on which one or more cases of plague have occurred. With regard to such proposals, I have taken the responsibility of advising that no prohibition either as to exportation or importation, under the circumstances referred to, was called for; and further, that no futile attempts at the disinfection of cargoes such as those of grain were justifiable, except in so far as the local medical officer of health had evidence that any individual sack or sacks of grain had had opportunity of becoming infected, or afforded indication of having been soiled by, or of having been eaten into by rats, whose dead bodies gave evidence of the occurrence of the disease in them. Thus far, my action, which has often been followed by the use for food of the cargoes concerned, has been fully justified by the results. In taking this attitude as regards the importation and exportation of articles of commerce in general, I have been influenced by the following considerations. Firstly, as regards grain cargoes there is an absence of anything that can be regarded as evidence to show that plague is communicable to man by means of an article of diet; and there is, further, evidence which goes to show that even when grain is purposely infected with the plague bacillus that organism dies in a few days when the grain is dry, as when packed for transit. Secondly, there is overwhelming evidence to the effect that cargoes from infected vessels have failed to communicate the infection of plague, even under circumstances when nearly every condition present seemed to favour such communication.

Danger of Introducing Disease.

Having regard to our present knowledge concerning the etiology of bubonic plague, I feel justified in holding the view that, in so far as danger of the introduction of that disease into this country is concerned, the first and most important point to be held in view in our port sanitary administration is such strict medical inspection of persons arriving from infected countries as shall go to secure the detection and immediate isolation of those mild attacks which are mainly identified with slight or

indolent bubonic enlargements and indications of general malaise. Next to this, and always to be observed, is the disinfection of all articles of clothing. etc., which have had opportunity of becoming infected either before they were packed for the journey or since. Thirdly, comes the disinfection of those portions of the vessel which may have been used by patients suffering from or suspected to have had plague. And, lastly, measures should be adopted to prevent the conveyance of the disease to the shore, from an infected ship by means of rats, which are peculiarly susceptible to the plague infection.—*The Globe.*

The Neglected A.V.D.

The case of the Army Veterinary Department has reached a crisis. All who wish to see our army well equipped and successful should take note of this fact. Before the present Boer war commenced, the necessity for the establishment of the department on a stronger footing was clearly demonstrated, but the official mind found some red tape excuse for ignoring the arguments put before it. Subsequently it was authoritatively announced that the matter would be attended to—but *when*? It has been left for the slowly dragging progress of the war, for the cruel and costly destruction of horses, and for the indignant letters of war-correspondents on the subject, to show what suffering and loss have been caused by this official apathy. Is there no one to do for the War Office what Lord Wolseley has just done for the Aldershot division? In this one particular of horseflesh the loss to the country has been enormous, owing to the ridiculously inadequate number of army veterinary surgeons with the troops in South Africa. And the evil has been intensified by want of organisation, and by insufficient means for carrying out the veterinary duties.—*Illus. Sporting and Dramatic News.*

Parish's Patent Steam-Jacketed Cooker

Parish's Patent Steam-Jacketted Cooker Co., Ltd., of 97d Queen Victoria Street, London, report that they have received an order for their Jacketted pans and geysers from the Chinese Eastern Railway Company, (Manchurian Railway) for use on their steamers, some to have inner pans, copper tinned, for cooking the food for the men, and the others, a similar apparatus, as supplied to the Lancashire and Yorkshire Railway Companies, for their stables, viz., a 64-gallon jacketted pan and geyser with a steaming pan attached to the side. The manager of the Chinese Eastern Railway Company informs Messrs. Parish's that they intend to use the latter for boiling the linen of the troops and emigrants on board, and the steaming pan for disinfecting the same, in addition to which purposes the cookers will provide a constant supply of hot water from the geyser attachment. It would seem from this that Parish's Patent Steam-Jacketted Pan and Geyser can be put to a variety of uses.

A New Departure in Irish Bacon Curing.

The Wholesale Co-operative Society of Manchester have from time to time laid down in very many districts of Ireland, Creameries and Butter Factories, and so well and enormously has the business developed that they still continue to spend many thousands of pounds in adding to and extending their butter producing equipment. Their operations are simply on a gigantic scale, and are carried on to the mutual advantage of farmers and co-operators alike. This is as it should be, and is a feature in the development of the Irish agricultural industries well worth noting. The natural outcome of creameries is pig growing, and the destiny of pigs is usually settled in bacon factories. At least, it is so in Ireland. The attention of the Wholesale Society has therefore been directed to the fact that much greater use could be made of the separated milk produced, and converted into bacon. In 1899 the United Kingdom paid to Denmark, the United States, Canada, and a few other ccuntries, the enormous sum of £10,400,602 for bacon alone, and for hams an additional sum of £4,094,500. Surely we can produce some of this food at home? In any case, the Wholesale Co-operative Society mean to try, and have decided to construct a handsome modern bacon factory in Tralee, co. Kerry. The factory will be entirely new from the foundations, and will contain a very up-to-date equipment of mechanical appliances. The factory will be open to receive pigs, it is hoped, in six months' time. In the interim more attention than ever may be given to breeding, so as to ensure a large supply.—*Meat Trades' Journal.*

Foot-and-Mouth Disease in Wales.

Despite the vigilance of the Board of Agriculture Inspectors and the slaughtering of many animals, two fresh outbreaks of foot-and-mouth disease occurred on Wednesday, 29th ult., near Rhyl. The stock at the Vicarage grounds, Dyserth, as well as that on a farm close by, are affected, and it is feared that the disease is gradually spreading. The Board of Agriculture have resident inspectors in the district, and the affected farms are guarded night and day.

ARMY VETERINARY DEPARTMENT.

Distribution of Natal Army.

On the march, near Paardekop: Vet.-Lieuts. Wilson, Coley, and Harris; C.V.S. Pye, Pollock, J. A. Russell, Steele, Evershed, and Malone.
Head Quarters Staff, Paardekop: Vet.-Lieut. Cochrane.
Greylingstad: Vet.-Capt. Larnder, C.V.S. Knapp.
Standerton: C.V.S. Walker, Matthews, Cockburn, Anderson.
Paardekop and district: C.V.S. Tustin.
Meerzicht: Vet.-Lieut. Bartlett, C.V.S. Wardrop.
Zandspruit: C.V.S. Knott.
Ingagane, Dannhauser: C.V.S. Tate.
Dundee and Glencoe: C.V.S. Verney, Powell.
Drakensberg Defence Force: Vet.-Lieut Houston, C.V.S. Fyrth.
Newcastle: Vet.-Capt. Raymond, C.V.S. Fowler, Pollock, Wells, Neal, Peacocke.
Volksrust: Vet.-Maj. Rutherford, C.V.S. Towers.
Ladysmith: Vet.-Lieut. Tatam, C.V.S. Dalgleish, Cromer, Cox.
Mooi River: Vet.-Lieut. Williams and Durrant, C.V.S. Quinlan, Stewart.
Pietermaritzburg: C.V.S. Lowe and Crawford.
Durban: C.V.S. F. Carless.

C.V.S. Aitken ordered to Maitland.
C.V.S. Rees to Aliwal North. Aug. 1
C.V.S. Glasse ordered to Green Point.
V.-Maj. Bostock to Middleburg.
C.V.S. Wilson-Barker to Pretoria.
V.-Col. Smith goes to Kroonstad.
C.V.S. Crone to Ladysmith. Aug. 7.

COMMUNICATIONS, BOOKS, AND PAPERS RECEIVED—Messrs. H. Leeney, E. R. Edwards, J. Hobday, E. White Wallis. *The Sporting and Dramatic News, The Chester Courant.*